

Research and evaluation of the e-vote 2011 project

Institute for social research
Oslo

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Provider's project proposal (A1, A2, A3 and A5)

Introduction

The e-voting trial in 10 Norwegian municipalities in the forthcoming local election can be considered partly as a natural experiment and partly as an extension of a development in which new information and communications technology has become part of the everyday lives of most people, social organisations, private institutions and public authorities. Regardless of what viewpoint is championed, it is essential to understand the e-vote and its democratic effects in its specific context: Norwegian local democracy and the 2011 local election. We therefore wish to connect Research and Evaluation of the E-vote 2011 Project with traditional Norwegian election research and the established research tradition in local democracy research. At the same time, the research must incorporate the new issues that arise in the meeting between new technology and election management. These new issues partly build on classic themes in election and democracy research and partly break with classic voting and democratic traditions through that letter "e" in front of vote. This means that Research and Evaluation of the E-vote 2011 Project must incorporate expertise that corresponds to the new issues, as well as making use of the advantage of a direct institutional connection to relevant and ongoing investigations in more traditional electoral and democratic research. This applies especially to the Local Democracy Survey and the Evaluation of Reduction of Voting Age to 16, both of which are being performed on behalf of the Institute for Social Research (ISF), with the Uni Rokkan Centre and the Department of Political Science at the University of Oslo as partners. With such a connection to other research and evaluation projects focusing on the forthcoming local election, this Research and Evaluation of the E-vote 2011 Project will secure a total professional perspective and effective use of resources, as well as coordination in connection with data collection, analysis and communication of results.

The project described here will therefore be led and coordinated by ISF (applies to both Area A and Area B), while at the same time including comprehensive collaboration with the Uni Rokkan Centre in Bergen, the Norwegian Institute for Urban and Regional Research (NIBR) in Oslo, the Norwegian Computing Centre (NR) in Oslo and the Department of Political Science at the University of Oslo (UiO).

Researcher II Signe Bock Seggaard has the project manager responsibility, and together with Researcher I Jo Saglie and Professor Harald Baldersheim she will handle the work involved in Area B

"Coordination of Research". – Segard and Saglie are both researchers at ISF, while Baldersheim is professor at the Department of Political Science at the University of Oslo.

The following researchers will take part in Area A "E-voting Research Assignment": researcher I Jo Saglie, researcher II Johannes Bergh and researcher II Guro Ødegård from ISF, researcher I Dag Arne Christensen from the Uni Rokkan Centre, professor Harald Baldersheim from the Department of Political Science (UiO), researcher II Gro Sandkjær Hanssen and researcher III Marte Winsvold from NIBR, researcher II Kristin S. Fuglerud and researcher II Ingvar Tjøstheim from NR. In addition, a doctoral candidate at the Department of Political Science (UiO) will be associated with the project. We believe that such a team of researchers from different environments will be positive for the project.

Collaboration between these five institutions gives the research group unique experience and expertise in research into Norwegian local democracy, voter behaviour and media as well as electronic solutions for democracy and voting in particular and the legal framework. The project group is connected with the most central research environments in the country when it comes to research into (electronic) local democracy, (electronic) political participation, electoral research and technical solutions for inclusion. The project group will thus have a wide ranging professional composition, which will strengthen the total and consistent perspective that we believe should be the framework for an evaluation of e-voting 2011.

The overall intention with this Research and Evaluation of the E-vote 2011 Project is partly to evaluate the democratic effect of e-voting with regard to specific evaluation criteria and partly to explain this effect (or possibly the lack of democratic effect). Thus our approach is that e-voting 2011 is to be understood as a democracy project endorsed by the overall goal of democratic gain - that the project shall have a democratic effect - while at the same time the project is being conducted in a context that is important to bear in mind in order to explain the extent of goal realisation.

This contract version of the project description then continues with a description of how Area A "E-voting Research Assignment" will be implemented as a research project consisting of several sub-projects, A1-A3 and A5. For each of the projects we shall specify who the responsible researcher is and who will be participating as project workers. (Also refer to Annex 3 in this connection.) The basic data and methodological concepts in the project as a whole will firstly be described before an account of the topics and issues to be covered through the individual sub-projects A1-A3 and A5. For a summary and brief version of our response to the various topics and issues in the Ministry of Local Government and Regional Development's specification of requirements, refer to the table in the section Overview of the sub-projects in Area A "E-voting Research Assignment".

Area A "E-voting Research Assignment"

Because Area A is organised as an integrated research project with extensive collaboration between the sub-projects, the data sources and methodological approaches applied will be used in several of the sub-projects (A1-A3 and A5). To avoid repetition, we shall begin with a joint description of the data basis for Area A, followed by a description of the individual sub-projects (A1-A3 and A5), referring to which data sources and methodological approaches will be used.

Research design, method and data

To illustrate the democratic effect of e-voting and to explain the democratic effect that has been achieved, Research and Evaluation of the E-vote 2011 is dependent partly on data from and about the ten municipalities that are performing the e-voting trial and partly on data from so-called control municipalities that are not taking part in the trial. The same applies at individual level: voters in the ten selected e-voting municipalities versus voters in municipalities that are not taking part in the trial (the control group).

There follows a description of the whole data basis for Research and Evaluation of the E-vote 2011:

Data about the population of the ten e-voting municipalities (quantitative survey)

It is essential for the project to be able to describe and analyse voting, use of and attitude to e-voting, other forms of political behaviour, attitudes and social background among the potential voters in the ten municipalities. Analysis of such data will be important in several areas of the project.

We use two data sources for information about the population, or more correctly those entitled to vote, in the ten municipalities. To begin with we will perform a representative and quantitative survey in the trial municipalities that will include the following topics:

- Confidence in and attitude towards e-voting versus paper voting
- Accessibility - including design of the technical solution
- Internet activity and ICT expertise
- Reasons for e-voting - reasons for not e-voting
- Local media coverage of the municipality's e-voting trial
- Views on "family voting" and buying and selling votes
- Political behaviour and participation in earlier elections.

It will be desirable to distinguish between e-voters, paper voters and non-voters in such a survey and thereby get a representative selection of each of these three groups. It is interesting for the project to be able to study differences in attitudes, ICT expertise, confidence and political preferences between these groups. Among those who have used the opportunity to vote electronically, it will be relevant to

ask about the voting itself. Did the voter have any problems in actually casting the vote? Were they alone when they voted or were they together with others?

A central issue in the design of the quantitative survey will be to gain access to a sufficient number of voters who voted electronically. If the opportunity to vote electronically is used by a large number of voters, these will be captured in a random survey. On the other hand, if only a small group votes electronically, special measures will be needed to access this group.

What can we therefore expect of the use of electronic voting in connection with the trial? Experience of electronic voting in other countries indicates that use of this system will be limited. Also, in Norway voting on paper is relatively easily accessible, including through long period of advance voting. This may limit people's need to vote electronically. At the same time, Norway has a population with easy access to and frequent use of the internet. We may also imagine that the trial will create substantial interest, which may also cause many to choose electronic voting. All in all, it is difficult to predict the use of electronic voting in the trial municipalities. The research project must therefore allow for extensive use of the scheme, but also that it may be so little used that it will be difficult to reach voters who have actually cast an e-vote.

We have obtained tenders for performing the quantitative survey from three opinion poll providers in Norway: Statistics Norway (SSB), Respons Analyse and TNS Gallup. We are received well prepared bids from all three possible suppliers. Of the three, Statistics Norway and Respons Analyse have their own individual strengths that make them particularly suitable for the project. TNS Gallup has provided a good tender, but it does not stand out against SSB or Respons Analyse.

One advantage with Respons Analyse in Bergen is that they are to carry out the Local Democracy Survey 2011, as well as a survey of 16 and 17 year-olds in connection with the reduction of voting age trial. The survey for the e-voting trial will contain a number of the same questions as these surveys and the highest possible degree of comparability is desirable (see discussion of the Local Democracy Survey below). Furthermore, some form of coordination of these surveys is necessary as regards selecting the sample. The two trials of reduced voting age and e-voting will both be performed in four municipalities (Hammerfest, Mandal, Re and Ålesund). The quantitative surveys for both these research projects (trials of reduced voting age and e-voting) will therefore be partly directed at a small group of voters: 16 and 17 year olds in these four municipalities. It would not be a good idea to have the same respondents telephoned by two surveys on a similar theme within a short space of time. Respons Analyse has therefore proposed that we coordinate the two surveys as regards 16 and 17 year-olds in the four municipalities. This target group would therefore only be contacted in connection with one survey.

Respons Analyse also has a strategy for the potential problem of reaching a sufficient number of e-voters. They would first make a random selection of potential voters in the 10 municipalities (from the

population register). When a number of interviews have been done, the distribution of e-voters, paper voters and non-voters will be checked. If this is satisfactory, the remaining interviews will be performed in the same way. If on the other hand there is not an adequate number of e-voters, the remaining respondents will be screened for e-voting. This means in practice that the interview starts with a question of whether the respondent has voted electronically. Then, more interviews are held with e-voters than would have been the case with a random selection; in the end we may only interview e-voters so as to fill a given quota for that group.

We believe that Respons Analyse has presented a good, feasible design for a survey in the ten e-voting municipalities. The desire for comparability between the survey and the two others that are being carried out in connection with the local elections in 2011 is also an important reason for our choosing Respons Analyse as provider of survey data for the e-voting project.

As regards design of the survey's sample, we see two possibilities. The first is a random selection to arrive at 2,000 completed interviews, with voters in each of the ten municipalities having the same probability of being selected. Such a survey would contain more respondents from larger municipalities than from small ones and the survey will be representative of the ten municipalities as a whole.

The other alternative is a random selection in each municipality to arrive at 300 completed interviews in each municipality. Voters in small municipalities will be over represented, but we will have the opportunity to perform analyses for each individual municipality. The second method would probably result in a lower response percentage than the first. Reaching 300 respondents in a small municipality could be a problem. The second method would also involve carrying out 3,000 interviews within a time frame that is no longer than if we were to carry out 2,000 interviews with the first method.

We have not yet decided which of these alternatives will be used.

Data about the population of the ten e-voting municipalities (electoral roll)

The other data source for voters in the 10 municipalities is the electoral roll. The municipalities involved in the trial will set up an electronic version of the electoral roll. The project group will have access to data from the electoral rolls (ref e-mail from Beate Nygård 17 March 2011). Here we will have information about how many have voted electronically, compared with those who have given an advance vote on paper and those who voted on the day of the election. There will also be information about the time of e-voting and to what extent each voter has used the opportunity to e-vote more than once, so as to amend the vote given earlier. As we understand the response from the Ministry of Local Government and Regional Development, it will also be possible to review voting in the three groups (e-voters, other advance voters and voters on Election Day) in that these are registered in aggregate

form in the electoral committees' meetings books. In this way we can compare the distribution of parties in these groups.

The electoral roll data includes personal identification numbers, which means that gender and age can be identified. The ministry will not provide data with personal identification numbers to the research project, but will include information about gender, age and municipality of residence in the data that the project can access.

It will also be desirable for the research project to connect electoral roll data with other register data so as to obtain information about education, income, profession, immigrant/country background and marital status for the individual voter. Statistics Norway (SSB) would be able to perform such a link with other registers before the data is transferred to the research project (without personal identification numbers of course).

The electoral roll data is absolutely essential so as to be able to evaluate use of e-voting and the effect of the trial on electoral participation, as well as to be able to analyse the characteristics of those that use e-voting compared with other voters. Since the electoral roll is a total count of all voters in the 10 municipalities, there would be no problem with making a representative selection or with reaching e-voters if it should prove that very few have used the e-voting opportunity.

Comparable data about the entire Norwegian voting population (quantitative survey)

The research project will also have access to two data sources that describe the entire electorate in Norway and that can be used as a basis for comparison for analysis of data from the 10 municipalities. The two data sources will largely be directly comparable with the survey and electoral roll data from the trial municipalities.

Firstly, a local democracy survey will be made in connection with the 2011 local elections. This is a comprehensive representative survey¹ aimed at the entire Norwegian voting population. The e-voting project will have some questions included in this survey and will have access to the entire data file. Topics that could be covered in both the survey in the 10 municipalities and the Local Democracy Survey include attitudes to e-voting, confidence in the electoral system, reasons for not voting (among

¹ A selection method based on stratified selection is used, which means that small municipalities are over represented. Data that is representative of the whole population can be obtained by post stratification or weighting.

those who do not vote) and expertise in the use of ICT. Social background variables will also have the same format in the two surveys, so that comparable analysis is possible.

The project undertaking the local democracy survey will also collect representative electoral roll data that covers the entire Norwegian electorate. Statistics Norway is making a selection of 10,000 voters from the electoral roll, including information about whether the individual has voted or not. This data file is linked to register data on education, income, profession, municipality, immigrant background and marital status. This gives a data file that is representative of the whole Norwegian electorate and can be compared with the electoral roll data from the trial municipalities.

There is also a large overlap between the project group for the Local Democracy Survey and our proposed e-voting project group. Everything is therefore in place for the effective coordination of these surveys.

Qualitative interviews with editors/journalists in selected local newspapers

Qualitative interviews will be held with editors and journalists from at least one newspaper in each of the ten trial municipalities. The purpose of the interviews is to obtain an insight into how the e-voting trials are being covered in the local media, who has been involved in any debate about the trials, the extent to which and how such a debate has been managed and what the newspaper editors attitudes are to the scheme and what attitudes they have conveyed to readers. The interviews will be semi structured. They will initially be based on an interview guide with preformulated questions, but the follow up questions will largely depend on what the informant answers, and the informant will also be able to bring new topics into play. In order to prevent media coverage being influenced by the research interviews, they will be carried out immediately after the election. In order to ensure that the interviews result in good, relevant information and that the informants themselves understand the purpose of the interview, they will be sent an e-mail before the interview with information about 1) the background to the interview in the form of a project description and a description of the project's purpose 2) what type of information we are particularly interested in and 3) the project's research ethics considerations. This last point is because this type of data source must be reported to Norwegian Social Science Data Services (NSD), which is privacy ombudsman for the research.

Focus group interviews with young people

An in depth study will be carried out in one of the municipalities taking part in the e-voting trial. The municipality selected as a case will also be one that has participated in the trial of voting for 16 and 17 year-olds in the local elections. Three different groups of young people will be gathered for focus group interviews: representatives of the young persons' council, the pupil council and voluntary youth

organisations. Teachers who have been responsible for information regarding the electoral trial for 16 and 17 year-olds will also be important informants, so as to reveal the extent to which electronic voting has been informed about and discussed at school. In this connection, it will also be possible to obtain the young people's attitudes to and confidence in paper based versus electronic voting and their perception of what is acceptable behaviour in connection with voting, ref buying and selling votes and family voting. Each of these informant groups will have different preferences and we will thus obtain information from the different informant groups about what has worked well and less well in terms of availability of information before the election - and any issues with the voting itself.

The focus group interviews with young people are coordinated with the project Evaluation of Reduction of Voting Age to 16 and carried out by the same researcher. This ensures that it is possible to compare data from the selected e-voting municipality with corresponding data from other municipalities taking part in the reduced voting age trial.

Review of local media coverage

A review will be made of coverage in the most important local newspapers in the ten trial municipalities, so as to discover the extent of coverage of the e-voting trial and how it is angled. The newspaper with the most coverage in each municipality will be investigated. The review will be for a period limited to one month before the election up to and including the Election Day itself. This period has been chosen because we assume that media coverage will be greatest just before the election and because media coverage will have the greatest significance for voters' attitudes to e-voting during this period, when the election is close at hand. The number of inserts, their location in the paper, who wrote them and the extent to which there is a debate on the topic will all be recorded. We will also record the extent to which the coverage is primarily neutrally informative, or whether it has a positive or negative angle. The most important arguments in the coverage will also be recorded. The purpose of this review is to investigate whether there is any connection between media focus on the e-voting scheme and people's attitude to it.

According to the e-mail of 5 May 2011 from the Ministry of Local Government and Regional Development, researchers on the ISF project have been cleared for direct access to this media monitoring tool via the ministry. In this way, the researchers will receive directly from the supplier (Opoint) relevant hits according to a tailored search profile (based on ISF's input).

The intention will be to obtain an overview of hits in local newspapers in the research municipalities. According to the e-mail from the ministry, the ministry envisages that contact between ISF's researchers and Opoint would be established after contract signature.

Analysis of the content of local internet debate

An analysis will be made of the content of internet debate on e-voting in two of the research municipalities. The purpose of this analysis is to obtain a deeper understanding of how the e-voting scheme is perceived and discussed by that segment of the population that participates in net debates. Such a study gives valuable input for understanding how the e-voting scheme is received and interpreted and what processes lead to the scheme becoming well endorsed among the local population, or alternatively is received with scepticism. A PhD candidate at the Department of Political Science at the University of Oslo will perform this analysis as part of the doctoral work. The analysis will result in a separate memo or conference paper that will be completed at the same time as, and included in, the report of the remainder of the study.

Observation of and interviews with selected groups - voters with disabilities

An important motivation for implementing e-voting is that it could increase electoral participation and help to strengthen democracy by making the election more accessible for larger parts of the population. We have also seen examples of how user friendliness can have a great influence in voters' ability to vote as they wish. The problem of user friendliness was central to the controversy surrounding the American presidential election in 2000 (Bederson, Lee, Sherman, Herrnson, and Niemi 2003). Similarly, problems with user interaction meant that re-elections had to be held in some municipalities in Finland (Felten 2009). Even though there is agreement that user friendliness is a very important aspect of systems for internet voting (Bederson et al. 2003; Conrad, Bederson, Lewis, Peytcheva, Traugott, Hanmer, Herrnson, and Niemi 2009; Quesenbery, Cugini, Chisnell, Killam, and Redish 2007; Selker, Rozenwieg, and Pandolfo 2006), there have been few studies in this area and even fewer when it comes to accessibility for persons with disabilities and other vulnerable user groups. We know from other areas of application that technical accessibility is a prerequisite, but not necessarily sufficient, for achieving accessibility for the voters with disabilities (Roemen and Svanæs 2008). The actual accessibility of an e-voting solution is also affected, in addition to technical factors such as technical inoperability, degree of standardisation etc., by cognitive accessibility, i.e. how easy the solution is to understand and use (Gallego 2010; Ward, Baker, and Moon 2009). Cognitive accessibility is affected by factors such as use of language, symbols, metaphors, structure, sequence and navigation possibilities.

Research shows that it is necessary to carry out studies with actual users in order to be able to assess whether the solution is user friendly in practice and accessible for different groups (Roemen and Svanæs 2008). Another important reason why it is necessary to make observations and not just interview is the following: with interviews alone we risk missing vital aspects, perhaps quite simply because the informant himself is not aware of or clear about what actually happens and what might go wrong (Everett 2007). Examples of such aspect may be that the voter misunderstands significant

elements of the interface and votes differently from what they believe, that they do not understand when the vote is recorded and think they have voted when they have not etc. The lower the expertise of the user, the less critical the informant will be and the fewer doubts the informant will have about what might be happening, because they do not know what to expect.

Given this background, there will therefore be a qualitative study involving a combination of observation and interview. Emphasis will be placed on getting the informants' experiences, thoughts and opinions on both traditional voting and e-voting. Use will also be made of existing knowledge and research in both traditional voting and e-voting by comparing the two methods. This will be about accessibility in the physical polling stations, signage, distance, time, aspects regarding the availability of helpers, the accessibility of equipment and ballot papers, election material etc.

For r users with functional disabilities that make it necessary for them to use aids, it will often be best to make observations in the informant's natural surroundings such as at home, at work, at place of study etc. For this reason, the sub-project will make use of portable equipment such as cameras on tripods, sound recorders and laptops with software for observation, registration and analysis. There are other important reasons for performing interviews and observation in a normal situation rather than in new and unknown surroundings where the voter's own equipment is not used. Firstly, there are very many different types and versions of ICT aids, and each ICT aid will have many optional settings that the user will have optimised for his or her own needs. For example there are about 20 different braille readers in use, and just as many versions of screen readers, magnification programs, reading TV set ups, mice, switches, joysticks, speech synthesisers etc., It will usually be very time consuming to achieve the same settings on borrowed equipment. The informant will often not know what his or her normal settings are, since they may have been set up a long time ago or with the assistance of the supplier, and finding approximately the right settings becomes a matter of trial and error. It will often not be possible for the informant to use the equipment with the wrong settings without training and practice. Many users will also be reluctant to take their own equipment to a test laboratory or similar, or at least those who primarily use non-portable equipment. It will therefore be easier to achieve a wide selection of users by having the opportunity to go to the informant. The opportunity to include voters with disabilities who would primarily use e-voting to avoid travelling is greatest if the informant avoids having to travel in connection with the survey.

Mental barriers and attitudes with regard to the use of e-voting will be affected by the actual experience of using the solution (Gallego 2010). A person who is initially positive about the solution may lose all confidence because of specific aspects of the user experience, for example. Other factors will also be revealed, such as media coverage, ICT expertise, age, perception of security, confidence, accessibility in time and space etc. This sub-project will thus help to give concrete clarification variables in relation to voters' attitudes and actions. This will also contribute to the formulation of

relevant and precise questions in the quantitative e-voting survey and in avoiding unnecessary questions. It will also be possible to interpret and understand the results of the representative surveys based on the results of this sub-project. It is important to understand a method's possibilities and limitations. There are also quantitative elements, even in what are normally described as qualitative methods. When recruiting participants for this sub-project, we will attempt to obtain the best possible dispersion of participants based on factors that may be significant for accessibility, attitudes and skills, i.e. earlier ICT expertise, gender, election experience, attitudes to traditional voting and e-voting and type and degree of disability and use of ICT aids.

The in depth studies will be made during the e-voting period so that participants will have received the same information as all other voters, i.e. codes, election brochures and other information. The procedure is based on experience from previous evaluations of e-voting prototypes carried out for the Ministry of Local Government and Regional Development in 2009 (Fuglerud, Halbach, Dale, Solheim, and Schultz 2009). While the focus in this evaluation of prototypes was primarily on accessibility and user interaction aspects after logging on, we will now focus on the whole voting process, from interpretation of information material to any practical barriers and understandings, as well as positive experiences.

It is planned to investigate the following user groups in our evaluation. All have specific accessibility issues and have their own requirements for the design of the e-voting solution:

- the visually impaired
- the hearing impaired
- the physically impairment
- those with a cognitive function impairment

The table below illustrates the distribution of the various types of functional disabilities in the population.

Target group	Number
Visually impaired	About 130,000 or 2-3% of the population. About 5% colour blind.
Hearing impaired	About 600,000 or 14% of the population.
Physically impairment	About 24% with muscular or skeletal illnesses
Cognitive function impairment	About 30% have reading and writing difficulties; 500,000 or 11% are dyslexic

As regards the number of participants in each group, this is about weighing up what is possible in practice, what is normally reckoned to be a sufficient number of participants and what resources we

can use for this. In studies of usability, we can often document important factors with about 5 users per group (Dumas and Redish 1999; Nielsen 1993; Nielsen 2000). It is also important to achieve an adequate dispersion among informants, as explained earlier. We will aim at about 20 informants. Recruiting will be via user and interest organisations, with which we have good contact from many other research projects. It is normal to express appreciation to the informant with a gift of about NOK 500 for this type of participation.

In order to obtain good results, this will be carried out as a field study, that is to say in the voters' natural surroundings. Before the evaluation, voters will be given documentation about the study in the form of information, personal protection and confidentiality information, consent form etc. As a member of Norwegian Social Science Data Services (NSD), we have established routines for this type of survey and all personal protection aspects will be approved by the privacy ombudsman for the research (NSD) in advance.

After a short introductory interview with a few questions, we will present the voter with an election scenario that is based on the voters' being familiar with the paper based method (with the exception of first time voters), unless the voter actively desires otherwise. To all intents and purposes therefore, the voter makes an authentic vote, either using a copy of the solution or with a test identity. It is important here for the voter to indicate how he or she intends to vote, so as to be able to check afterwards that the correct vote has been given, i.e. that the voter managed to fulfil his or her voting intentions.

Data collection in the test phase itself is by means of observation and the use of technical equipment such as eye tracking and video and sound recording. After the voting process, recordings will be shown to the informant so that he or she has the opportunity to give additional information such as explanations, thoughts, feelings etc.

Some of the explaining factors for a well performed vote will be:

- Did the voter achieve the desired result?
- How much time did the voter take?
- How did the voter resolve the task?
- To what extent did the voter's technical aids work with the solution?
- What was easy and what was difficult?
- What kind of errors occurred, and when?
- What degree of control did the voter feel that he or she had?

Use of data and technical considerations

Essentially, the research material shall be available to those who wish to test the researchers' conclusions. There will be two limitations however. Firstly, considerations of personal protection and the requirements of the Data Inspectorate. Secondly, in order that the research group - which will have put a considerable amount of work into performing the survey - shall be able to analyse the results

with the aim of preparing interim and final reports, there is a need for a screening period during which the material is not freely available to all researchers. Other researchers, with whom we will collaborate, will however have access to the material before it is released for general use. This applies, for example, to researchers working on the project who will evaluate the trails of reduced voting age and the local democracy survey. In order to satisfy the requirements of the Data Inspectorate and Statistics Norway, it will be necessary for ISF to enter into agreements with such partners regarding the use and publishing of data. In practice however this will not be a problem, since many of the researchers on these two projects are also actively participating in Research and Evaluation of the E-vote.

When the screening period expires, the material will be transferred to Norwegian Social Science Data Services. The material will thus be available to all interested researchers, within the limitations of personal data protection.

ISF has Norwegian Social Science Data Services (NSD) as its privacy ombudsman for research. Researcher I Bernt Aardal is the contact person for the privacy ombudsman at ISF. Generally, the head of the institute is responsible for action. For each individual research project this responsibility is delegated to the project manager, who is responsible to the privacy ombudsman (NSD) and the Data Inspectorate for administrative procedures. In Research and Evaluation of the E-vote, the project manager for Area B Coordination of Research, Signe Bock Segard, has this responsibility. In some cases the responsibility will be delegated to researchers in the individual sub-projects for purely practical reasons. For a more detailed account of how these technical issues will be handled, refer to Area B Coordination of Research and Annex 3.

Sub-projects A1, A2, A3 and A5

A1: Availability and accessibility for the voter

It is a clearly expressed goal that e-voting shall be available to those who are entitled to vote. Availability is one of the reasons for carrying out the e-voting trial. Availability and accessibility can be viewed in the light of the voters' *mental perception* (subjective perception) of accessibility when voting *can* be done electronically in uncontrolled surroundings, such as the voter's own home. But accessibility is about more than just a perception. Accessibility also has a practical and more objective aspect in the form of time and space. Both the subjective and the more objective aspects of accessibility can be expected to influence the voters' attitudes to e-voting. This sub-project puts the spotlight on both these aspects of accessibility through a closer focus on a) various groups of voters with disabilities, b) young people and c) voters in general.

Voters with disabilities. Since accessibility has both objective and subjective aspects, it is important to look more closely at how a voter subjectively perceives the e-voting solution as regards accessibility, then at attitude to e-voting, which is something more than and different from the e-voting solution itself, and the relationship between these. This last is important because negative perceptions will contribute to the creation of negative attitudes. This is well known in research into the use of IT. It is therefore important, from a methodology point of view, to get close to the voter's perception so as to be able to substantiate what creates attitudes to e-voting and what percentage chose e-voting vis-a-vis paper-based voting. For some groups, the availability of paper-based voting has been critical. Research shows that actual and perceived difficulties in connection with the polling station is one of the most important reasons for lower electoral participation among the voters with disabilities (Ward, Baker, and Moon 2009). It is therefore especially important to identify perceptions of e-voting and accessibility for some groups (see below). Figures will be obtained in the ten trial municipalities of how many used e-voting. It will also be possible to connect some demographic characteristics with figures of which method of voting the voters used. No data will be recorded that would allow one to separate out groups with special needs, groups where accessibility is perceived to be particularly relevant. These points form the basis for and provide guidelines for how the work in this sub-project will be carried out. Work on the project will be organised so that the results of the sub-project can be included in other sub-projects in which representative surveys are performed.

This sub-project will obtain information at individual level by means of observation and interviews. We will investigate and give an assessment of

- The extent to which e-voting contributes to what the announcement text calls (to) "*ensure that the actual act of casting a vote is accessible to all those who are entitled to vote without significant hurdles.*" What hurdles and thresholds are perceived will depend on subjective perceptions in combination with the nature of particular handicaps, for example.
- The extent to which "*e-voting makes it easier for voters to exercise their democratic rights.*" This is a particularly relevant question for those who need help because they use a wheelchair or are blind, for example. This has been documented among others by (Halbach, Fuglerud, Dale, Solheim, and Schulz 2010).
- The extent to which experience of e-voting gives "*better availability due to e-voting compared with paper-based elections*", and which factors can be identified as especially important. This could have significance for attitudes to e-voting generally for the social debate and for the creation of opinion.
- Accessibility for different groups. The next point is about four groups.
In this sub-project we will focus on those entitled to vote within these groups:
 - the visually impaired
 - the hearing impaired
 - the physically impairment
 - those with a cognitive function impairment

In order to identify factors that can explain opinions about and attitudes to e-voting vis-a-vis paper-based voting, good knowledge and understanding of the e-voting solution and technical expertise in ICT and especially human computer interaction and usability will be necessary. This sub-project will thus draw on earlier work connected with the e-voting project evaluating the accessibility and user friendliness of e-voting prototypes (Fuglerud and Halbach 2011; Fuglerud et al. 2009; Halbach et al. 2010).

For a comparative study it is important that participants and those who are interviewed do not only have experience of paper-based voting. It will be important to obtain opinions of the two solutions in relation to each other. We will seek to investigate the following points:

- Experiences of traditional voting
- Attitudes to and opinions about e-voting before and after the use of e-voting
- Attitudes to the use of paper-based and electronic voting respectively and individual thoughts and preferences about the two.
- Problems and issues with the actual voting procedures for e-voting and paper-based voting respectively (including identification/logging on)
- Comparing attitudes and opinions of new voters with those who have voted before. Do the new attitudes have different attitudes to those who have voted before?
- That the voter manages to cast the vote that he or she intends.
- Any digital dividing lines and the extent to which the e-voting solution fulfils requirements for accessibility for the voters with disabilities.
- What role does distance from and transport possibilities to the polling station play.
- What role does physical accessibility around and in the polling station play in relation to electronic accessibility.
- Perceptions of security and threats. This includes perceptions of
 - Anonymity and personal data protection
 - Reliability and assumption that there will be no technical problems. Are voters sure or unsure about whether their vote will be correctly registered and counted.
 - Stress in the voting situation. This may be related to there being a queue behind the voter in the polling station, but using an ICT solution that you are not previously familiar with can also be perceived as stressful.
 - Transparency in the solution and the voter's perception of control when using the solution. Surveys among the members of the Norwegian Association for the Blind in December 2010 indicate that there is a connection between the factors perception of control and attitude to e-voting.

Young people. As has been mentioned, accessibility is not just a question of facilitating physical conditions, but can also be connected with mental barriers to participating in an election. Mental barriers that can be connected with the fear of the new, for example, of now being so old that they must perform an act that is part of the adult world - taking part in an election. From this point of view it may be relevant to ask: how do the youngest voters perceive the accessibility of electronic voting? Was electronic voting a topic that was discussed? Does it make using the right to vote easier? What do

they think about the idea that in future it may not be possible to vote via the internet? A special focus will be directed at the youngest voters by means of focus group interviews in one of the trial municipalities. These will be groups of young people in a municipality that also has a trial of voting for 16 and 17 year-olds. One of the issues with this qualitative study is to achieve a deeper understanding of how young people consider the accessibility of electronic voting. This is a particularly interesting topic because here we will gain information and experienced based knowledge from an age group that has not previously taken part in an election, but who have technological aids as a natural part of their everyday school and leisure time. Focus group interviews will be held with various groups of young people, from youth council, pupil council and voluntary organisations. This data material will be supplemented with information about the role of the school as provider of knowledge and information about the trial.

Voters in general. In addition to the qualitative surveys among young people and groups of voters who have special problems with accessibility, it will be desirable to study the question of the accessibility of the election to voters in general. This can be done with the aid of the representative survey in the trial municipalities. We can ask e-voters if they would still have participated in the election if they had not had the opportunity to vote electronically. There may also be good reason to include more general questions about accessibility. Do voters find that practical hindrances make it difficult to vote? In earlier local democracy surveys, non-voters have been asked why they did not vote. One of the options was "I did not have the time or opportunity". Over half the non-voters gave this as an important reason for not voting in 2007. This is a relevant question to ask both in the local democracy survey and in the survey in the two trial municipalities. With electronic voting, you can avoid having to travel and e-voting is accessible 24 hours a day during the advance voting period. For people who are frequently on the internet and where there is a clear preference for the use of digital media and mobile units etc., accessibility can be about being online. We would thus expect the number of non-voters who state that they did not have the time or opportunity to vote to be less in the trial municipalities than in the country generally. If so, this would indicate that accessibility has increased with the introduction of electronic voting and that practical conditions are not preventing these people from voting.

For more information about data sources and the methodological approach in this sub-project, refer to the section "Research design, method and data".

A2.a: Trust and credibility

(trust in the Norwegian election system and in e-voting in particular)

It is an overall goal of the trial of electronic voting in 2011 that trust in the Norwegian electoral system is not weakened when the voting process is taken out of controlled surroundings such as a polling station. Essentially, Norwegian voters have great confidence in elections being correctly handled. The general election survey in 1997 asked the following question:

In some countries, people believe that elections are properly carried out. In other countries, people believe that elections are not properly carried out. If you think about the last election in Norway, how would you place your perception on a scale of 1 to 5, where 1 means that the last election was properly carried out and 5 means that the last election was not properly carried out?

82 per cent of the voters answered "1: the last election was properly carried out" and a further 11 per cent answered number 2 on this scale. Only 1 per cent answered "5: the last election was not properly carried out". Trust in the Norwegian electoral system is thus very high.

An important question for the project that will evaluate the trial of electronic voting is whether the introduction of voting in uncontrolled environment will shake this trust. It is desirable to ask such a general question about trust in the electoral system in the survey in the 10 trial municipalities and, if possible, to obtain comparable data from the local democracy survey. It will be interesting to compare trust in the electoral system among those voting electronically and those giving paper votes in the trial municipalities. Will the experience of voting electronically affect one's general trust in the electoral system?

If general trust in the electoral system is lower in the trial municipalities in 2011 than would be expected given the results of the general election survey in 1997, there would be reasons for looking more closely at characteristics of voters with low trust. Could this weakening of trust be traced directly back to the electronic voting trial? We will look at the connections between attitudes to e-voting and trust in the electoral system. Other characteristics of any voters with little trust in the electoral system, such as age, gender, education and ICT expertise, will be investigated.

In this context, the sub-project will focus particularly on the youngest first time voters' trust in and attitudes to the Norwegian electoral system and electronic versus paper voting, using data collected with the aid of focus group interviews. Is data security something young people are concerned about? Do they trust the technological solutions? To what extent do young people today feel secure that voting will remain secret with the use of electronic voting. These are some of the questions that will be taken up in the focus group interviews with this technologically competent generation - young first time voters.

It will also be desirable to look more closely at trust in ICT solutions generally and in the system for electronic voting in 2011 in particular. Trust in the electoral system and the way in which elections in Norway are organised is about trust in the electoral institution. With e-voting, there is a new component. This is about technology, i.e. about the systems but also what we might call ICT literacy. Trust in technology is affected by the technical solution, whether it is perceived as easy or difficult to use, its functionality, assumptions about security level, assumptions of whether personal data will be protected and how the solution conveys what it does in that one must confirm the submission of the vote given (transparency). Characteristics of the persons using the system will also play a role. Young people who like to use technology usually have good ICT skills, but may also have a low degree of reflection over personal data protection, sharing personal data etc. On the other hand, persons with a high degree of technical expertise will be sceptical about whether security is satisfactorily maintained. This means that surveys about trust in e-voting should have a differentiated way of asking the questions. This is important so as to be able to capture and comment on connections between the various aspects of trust in technology. Any improvement of further development of e-voting would be able to benefit from this type of information.

...

In order to understand voters' trust in and attitudes to voting electronically in uncontrolled surroundings in particular and e-voting generally, the project will use a separate sub-project to put the spotlight on local opinion makers - local politicians and media.

A2.b: Opinion makers - local politicians and media

The aim of this sub-project is to investigate how local opinion makers view electronic voting and how these opinion makers' attitudes are reflected in people's attitudes to and trust in e-voting.

As mentioned in the announcement text, one of the objectives is to maintain voters' high level of trust in the Norwegian electoral process. The new procedures introduced with the trial of electronic voting may challenge this trust. Questions of security especially, but also more fundamental objections about the value of election proceedings themselves for example, could affect how the scheme is received and what support it receives among voters. Since the e-voting scheme is new, many voters will not yet have any attitude to it and practically none will have any personal experience of using it. Given this attitude vacuum, media and local politicians could easily have an important opinion-shaping role and thus could have a significant influence on people's attitude to electronic voting. It is an established fact that local media, and particularly local newspapers, have a strong position in Norway.

In order to be able to comment on the conditions for holding a successful e-vote, it is therefore important to gain an insight into how local media and politicians, who are highly visible in public debate and considered to be opinion makers, view e-voting, and further whether this appears to influence various population groups' attitudes to and trust in the scheme. The primary question in this project will therefore be:

- How and to what extent do people's attitudes to and trust in e-voting reflect the viewpoints of local opinion makers?

The national public debate, as it has been played out in the Storting and in public through the media, shows that many politicians have both practical and principled objections to electronic voting. Essentially, we can expect that the e-voting project is well endorsed among local politicians in the ten e-voting municipalities and that they are motivated to make an extra effort to succeed with the e-voting trial, because the ten municipalities actively applied to participate. But even if we assume that the majority of politicians in the trial municipalities are positive about the scheme, there will doubtless also be objections and doubts among local politicians. How public debate about the scheme and the attitudes of politicians are conveyed to the population could have an influence on trust in the scheme, either positively or negatively. We may also assume in this context that local media have an important role in strengthening or weakening confidence in the new scheme, both because the media are arenas for conveying attitudes and public debate and also because they could effectively communicate their own attitudes to the people (Gulbrandsen 2010). Especially where people do not have a preconceived attitude, the intensity of exposure of the topic, how evident it is in the media and in opinion-makers' attitudes, has been shown to be important for the attitudes that are created among the population (Iyengar and Kinder 1987; Waldahl 1999). The amount of attention the e-voting trial receives in the local media, how the scheme is described, the extent to which the coverage is positive, negative or differentiated, what arguments are emphasised and who participates in the public debate - these aspects of the communication and discussion of the scheme are likely to affect how it is received among voters and how much trust people have in the scheme. The specific local electoral context could also be important. We might imagine for example that e-voting will be discussed differently, in terms of both extent and angle, in municipalities that are also participating in the reduced voting age trial, in that new technology and especially the internet as a medium have a tendency to be perceived as the tools of the young.

In this project, we will attempt to gain an insight into local opinion makers' attitudes to and discussion of electronic voting and the extent to which these are reflected in the trust and attitudes of the people by answering the following questions:

- Are politicians - those who express themselves in the local media - positive or negative about the e-voting scheme? What principled and practical arguments do the politicians have for and against the scheme?
- How is the trial described in the local media? How much space is the trial given, what are journalists' and editors' attitudes to e-voting and how is the debate proceeding? What arguments appear and which are emphasised?
- Voters' assessment of media coverage: How do voters themselves assess media coverage and how do they assess the significance of media coverage for their own attitudes?
- Can we trace any connections between the attitudes that appear in the local media and media coverage on one side and voters' attitudes to e-voting on the other?

To answer these questions the project will use data obtained through 1) qualitative interviews with editors and/or journalists in selected local newspapers in the ten municipalities participating in the e-voting trial, 2) the voter survey in the ten e-vote municipalities and especially the questions relating to trust in and attitudes to e-voting and 3) analysis of the content of local media coverage of the e-voting trial. Point 3) involves partly a review of coverage in selected local newspapers in the ten trial municipalities before the election to determine both amount and angle and partly a more thorough analysis of media coverage and the public debate *online* about the trial in two trial municipalities. Refer to the section "Research design, method and data" for a more detailed description of data sources.

A3: Secrecy of the vote (e.g. family voting, undue influence)

The secret ballot was introduced in Norway in 1884, partly to prevent persons in positions of power from being able to influence the voting of those dependent upon them (Danielsen 1964: 57). Electronic voting outside the polling station, as with the postal vote, could represent a break with this principle. The trial scheme does of course contain mechanisms that are intended to ensure that voting remains secret, but questions have been raised about whether these mechanisms will be adequate (see Smith 2010). Briefly, the dilemma is that a scheme intended to secure increased political equality (by making access to voting easier) can also damage that same equality (by giving one person influence over more than one vote). The project will therefore include a more detailed discussion of the relationship between the principle of secret voting and electronic voting, in the light of the international professional literature in this field (see for example Kersting, Leenes & Svensson 2004; Buchstein 2004; Gronke et al. 2008).

As the Ministry of Local Government and Regional Development points out in its specification of requirements, reviewing behaviour that breaks with the principle of secret voting involves some major challenges. Essentially there are two distinct types of breach: one is buying and selling votes and the other is improper influence when the vote is cast, for example within a family. It is in the very nature of this matter that it will be difficult for the evaluation project to give precise answers to how widespread such circumstances are.

The Ministry believes that the research should be supplemented with qualitative methods, such as interviews or focus groups. We have doubts whether this is appropriate. Specifically, we see three problems with qualitative methods in this context. Firstly, we are talking about action that is either illegal or socially unacceptable. The ministry asks whether honest answers to such questions will be given in quantitative surveys. This problem could be at least as great however in face to face conversations, not least in focus groups where respondents must admit to breaking laws or standards in conversation with other local residents. Secondly, the ministry is interested in finding the *extent* of such circumstances, which cannot be done in qualitative interviews. Thirdly there is the question of how to pick participants for focus groups or qualitative interviews. Since these must be assumed to be marginal phenomena, a representative group of local residents will carry the risk of not capturing anyone with knowledge of vote buying or family voting. Individual target groups could be picked instead. It is however not easy to select potential vote sellers or buyers. Family voting may be assumed to be most widespread among immigrant groups, since some of the immigrants' countries of origin have patriarchal family structures. Selecting, for example, a group of immigrant women for interview is not without its problems however. One risks stigmatising this group as potential norm breakers and furthering the stereotype of immigrant women as oppressed - or at any rate being accused of it.

We wish to primarily use quantitative surveys to review how the principle of secret voting is lived up to and circle in the problem via various types of survey questions - but also to supplement this with focus groups. Here we must take into account that influencing other voters through political discussion and conversation is a natural part of democracy. It is considered valuable for example for parents to discuss politics with young people in order to contribute to increased political commitment among young voters. The Local Democracy Survey and the quantitative survey in the 10 municipalities could be used to describe the extent of such legitimate influence as a backcloth for the analysis.

What characterises undesirable influence is that one is either coerced into voting for a particular party (or candidate on the party list) or is given money or other benefits to vote in a certain way. In the survey in the trial municipalities, we will ask e-voters *if they were alone* when they voted. This will be central to sub-project A3 for two reasons. Firstly, section 16 (1) of the regulations regarding the electronic voting trial says that "the voter shall himself ensure that voting is done alone and unseen". It will therefore be important to find out whether this is being followed in practice. We believe that voters will probably not consider a breach of this regulation so serious that that they will keep it from the interviewer - if indeed they are aware of the regulation at all. Second, the amount of voting done together with others will show the *potential* for improper influence. Other people having been present when the vote is cast does not however mean that they have necessarily influenced it. We will therefore put a follow up question to those who state that they have been together with others when

voting: did these voters feel under any pressure or were they actually exposed to pressure from those present to give a particular vote? If any voters answer yes to this question, it will be an indication of improper influence.

There is a further possibility that a voter who has been exposed to improper influence may take the opportunity to change the vote later. We will ask e-voters whether they have taken the opportunity to vote more than once. Those who have will be put a follow up question about their reasons for voting more than once. There will be several options, such as "made a mistake when voting before" and "have changed my mind", but we will also include an option formulated like: "was exposed to improper influence when voting before". This will measure the extent to which improper influence has been countered by the opportunity to vote more than once.

In order to estimate the extent of improper influence, we will also approach the problem by asking more indirect questions in the survey of the 10 trial municipalities, to both e-voters and paper voters. We can ask questions about whether one knows of or has heard about any attempts to buy votes or other enforced voting at the election. In the trial municipalities we can also ask direct questions about whether anyone has attempted to buy one's vote or has had pressure put upon them to vote in a particular way. This will probably be less sensitive, since one does not have to admit doing anything wrong. It could also be said that it is as important to identify *attempts at* improper influence as actual improper influence.

In addition to investigating the extent of breach of the principle of secret voting, it will be important to investigate voters' *attitudes* to the principle of secret voting. Such questions may be difficult to formulate, because they concern abstract principles that have little relevance to people's daily lives. The voters may not therefore have clear and well thought out points of view. This has two consequences. Firstly, the wording of the question may have a significant effect on the answer. There should not be a single attitude question to investigate a situation, therefore, but either several statements going in different directions or a question format in which the interviewee is asked to choose between two opposing points of view.

Secondly, many of the issues concerning secret voting will be perceived as largely irrelevant outside the trial municipalities, so that voters in the rest of the country will simply have no view on the matter. Such questions will therefore be most relevant in the survey in the trial municipalities. This may be reassessed however if there proves to be significant public debate about secret voting in national media.

A central point of the survey about how strong the *norm* of secret voting is will be about voting alone when voting electronically. Do the voters think it is important to vote alone or do they think it is OK to do it together with others? Other relevant questions will be to ask more directly about the relationship between secret voting and electronic voting outside the polling station: do voters believe these can be reconciled? Another topic may be to take up the responsibility for maintaining secret voting: do voters believe it is primarily the state's responsibility (through the design of the electoral system) or voters' personal responsibility? Here however it will be necessary to think out the wording of the questions very carefully.

On the basis of findings from the two quantitative surveys, this sub-project will also discuss family voting, improper influence and buying and selling votes as challenges to democracy. This will be done in the light of international literature.

For a more detailed description of these two data sources, refer to the section "Research design, method and data".

Since family voting is often linked to voters with an immigrant background, it may be desirable to separate out voters with such backgrounds in these surveys. The experience from earlier surveys in Norway is that the minority population of Norway is seldom included in the sample for such surveys. It is however possible that the surveys in connection with the 2011 elections will have a sufficient number of persons with minority backgrounds to be able to analyse this voter group's attitudes and behaviour.

It is also possible, but not yet decided, that Statistics Norway will carry out a survey among the minority population in connection with the election. Such a survey, aimed at voters with a so-called non-western immigrant background, was first done in connection with the election in 2007. The sample for the survey comes from Statistics Norway's electoral roll survey of the immigrant population, selecting participants who have voted. If such a survey is done in 2011, we have the opportunity to include some questions connected with secret voting in a family context. The survey gives a representative picture of the attitudes of Norwegian voters with a minority background. It will not be possible to separate out the individual municipalities.

In the qualitative part of this sub-project we will use the focus groups of young persons. It is possible that the norm of secret voting has not taken root among the young - who have less experience as voters. We will therefore find out through the focus group interviews whether the debate on improper influence has been thematised in local youth environments. More concretely, the turning point of the questions will be related to the extent to which the young respondents consider the buying and selling of votes to be a problem. Are they aware of its having happened? The theme is suitable for discussion

- because where does the border between legitimate and illegitimate political influence lie? Provision will be made for a debate of principle on this topic in the focus groups. For more information about the focus group interview as a data source, refer to the section "Research design, method and data".

A5: Participation and election turnout

The electronic voting trial will be assessed and evaluated after the event in various ways based on several different indicators. We believe that electoral participation in the trial municipalities and the use of electronic voting will be given considerable attention in public and political debate after the trial. It is therefore important for the research project to look more closely at electoral participation and the use of electronic voting.

The research project has access to data that makes it possible to answer the immediate descriptive questions: 1) what was participation in the trial municipalities compared with the country as a whole and compared with earlier elections in the same municipalities? and 2) how many and how great a percentage of voters used the opportunity to vote electronically?

As regards participation, we know from earlier elections in Norway that there can be great variations between municipalities and that participation can vary significantly from election to election; see for example Bjørklund & Saglie (2000). An unusually high (or unusually low) participation in the municipalities in question could therefore well be due to natural variation or factors other than electronic voting. The question therefore is how we can identify a possible effect of the e-voting trial on participation in the 10 trial municipalities.

The first thing that must be clarified is the extent of electronic voting. If it is not only an insignificant number vote on the internet, there are grounds for following up the question of a possible effect on participation. What we really want to find the answer to is whether those who vote electronically would have taken part in the election if they could only vote in the traditional way in polling stations. This is investigated as mentioned in A1. If many say that they would not have participated without the possibility of e-voting, this is an indication that the trial has helped to recruit new voters and has thereby contributed to participation being higher than it would otherwise have been. Even so, one should interpret the answers to such hypothetical questions with a certain amount of caution.

Another approach to answering the question of whether e-voters would have participated in a paper vote is to study other characteristics of these voters. From earlier research, we know a good deal about typical characteristics of those who participate in elections and those who are non-voters (Bjørklund and Kjær 2002; Elklit, Møller, Svensson, and Togeby 2005; Franklin 2004; Pettersen and Rose 2009;

Powell 1986; Rosenstone and Hansen 1993). If we were to describe a person who had a high probability of participating in an election, that person would be highly educated, middle aged, ethnically Norwegian, married, expressing great interest in politics and of the opinion that voting is a citizen's duty. If these are also typical characteristics of e-voters in the 2011 elections, we can conclude that they would have taken part in the election even without the opportunity to vote electronically.

According to earlier research, typical characteristics of non-voters include low education, age under 30, possible minority background, unmarried, little interest in politics and unlikely to agree with the view that voting is a citizen's duty. If these are typical characteristics of e-voters there is every reason to believe that the trial has helped to recruit new voters who would not otherwise have participated in the election. The empirical results of the trial will doubtless not be as unambiguous as the extremes (or hypotheses) we have outlined here, but we believe we can go a long way towards answering the question of the trial's effect on participation by studying such circumstances.

In this part of the project we will use the electoral roll data from the trial municipalities, which is linked to information about age, education, immigrant background and marital status. We will also use questions in the survey of the trial municipalities, especially those that are linked to voting as a citizen's duty and political interest. Election statistics at municipal level will also be relevant.

It is a further goal for us to give a more complete description of voters who use electronic voting, including as regards characteristics that are not strongly linked to participation. This includes for example gender, income, attitudes to e-voting and ICT expertise. In this context, literature on digital divides shows that socioeconomic background, ICT expertise and the general extent of ICT/internet in the community are important conditions for citizens' use of ICT both generally and in a political context. (Norris 2001) documents that a person's use of ICT is affected by socioeconomic background factors, such as education and income. She stresses that the significance of access to ICT/internet is less than such background factors. This is because use of ICT presupposes an expertise that is not only conditional on actual access but also on social and cultural conditions (Frønes 2002). Norris also shows that political use of ICT/internet to any great extent is conditional on political interest and commitment, which is the basis for her conclusion: It is overwhelmingly those who are already politically active who participate in e-democracy (Norris 2001:238), which gives grounds for expecting that e-voting will not significantly increase participation. The extent and spread of ICT in the public, political arena is therefore more likely to strengthen than weaken the political differences between different groups of citizens. These are conclusions that have been tested in many empirical studies and that have received a great deal of support (Frønes 2002; Fuller 2004; Grönlund 2004;

Oostveen and Besselaar 2004; Saglie and Vabo 2009; Sipior and Ward 2005; Sullivan et al. 2002; Tobiasen 2005).

Finally we will describe e-voters' political preferences and voting. Are these voters a cross section of the population of their municipalities when it comes to voting or do they support particular political wings or parties? In other words we will investigate whether e-voting is an opportunity for individually political parties to attract voters or whether the scheme is in practice party politically neutral.

Summary of the sub-projects in Area A "E-voting Research Assignment"

The table below summarises the integrated research project's follow up of the topics A1-A3 and A5 in the Ministry of Local Government and Regional Development's requirement specification with information about applied data and methods as well as the researchers responsible (marked in **bold**).

Table: Research and Evaluation of the E-vote's follow up of the topics in the ministry's requirement specification

Topic	Data and method	Researchers responsible
A1: Accessibility for the voter	Observation studies of voters with disabilities Qualitative interviews with voters with disabilities Focus group interviews with young people Representative voter surveys	Ingvar Tjøstheim Kristin S. Fuglerud Johannes Bergh Guro Ødegård
A2.a/b: Trust and credibility	Representative voter surveys Focus group interviews with young people Interviews with local editors/journalists Analysis of content of media coverage of the e-voting trial	Jo Saglie Guro Ødegård Ingvar Tjøstheim Kristin S. Fuglerud Marte Winsvold Gro Sandkjær Hanssen Harald Baldersheim Ph.D candidate
A3: Secrecy of the vote (e.g. family voting, undue influence)	Representative voter surveys Focus group interviews with young people	Jo Saglie Johannes Bergh Guro Ødegård
A5: Participation and election turnout	Representative voter surveys Electoral roll data	Johannes Bergh Dag Arne Christensen

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